CLAIMS

What is claimed is:

1. An application specific integrated circuit (ASIC) comprising:

a standard cell, the standard cell including a plurality of logic functions;

at least one bus coupled to at least a portion of the logic functions;

a plurality of internal signals from the plurality of logic functions; and

a field programmable gate array (FPGA) function coupled to the at least one bus and the plurality of internal signals, the FPGA function including a debug client function that observes and manipulates the at least one bus and the plurality of internal signals.

2. The ASIC of claim 1 wherein the at least one bus comprises an internal bus.

3. The ASIC of claim 2 wherein the debug client function observes and manipulates at least one point of interest on the standard cell.

4. The ASIC of claim 1 wherein the debug client function is programmed by a server.

5. The ASIC of claim 1 wherein the debug client function further includes:

an external communicator logic function for receiving and transmitting information to a server;

selector logic coupled to the at least one bus and the plurality of internal signals, and

an interface logic coupled between the external communicator logic and the selector logic for providing communication therebetween.

6. The ASIC of claim 5 wherein the interface logic comprises:

a storage logic function for storing a state of signals of interest from the selector logic and providing the state to a server;

a comparator logic function coupled to the storage logic function for comparing the signals of interest from the selector block function; and

an output logic function coupled to the comparator logic function for controlling the internal signals on the ASIC.

7. The ASIC of claim 4 wherein the server utilizes the debug client to debug hardware within at least one of the plurality of logic functions.

8. The ASIC of claim 4 wherein the server utilizes the debug client to debug software within at least one of the plurality of logic functions.

9. A debug client function within an application specific integrated circuit (ASIC), the debug client function being within a field programmable gate array (FPGA) function; the client debug function comprising::

an external communicator logic function for receiving and transmitting information concerning a plurality of signals of the ASIC to a server;

selector logic coupled to the at least one bus of the ASIC and the plurality of

internal signals, and

an interface logic coupled between the external communicator logic and the selector logic for providing communication therebetween.

10. The ASIC of claim 9 wherein the at least one bus comprises an internal bus.

11. The ASIC of claim 9 wherein the debug client function observes and manipulates at least one point of interest on the standard cell.

12. The ASIC of claim 9 wherein the debug client function is programmed by a server.

13. The ASIC of claim 9 wherein the interface logic comprises:

a storage logic function for storing a state of signals of interest from the selector logic and providing the state to a server;

a comparator logic function coupled to the storage logic function for comparing the signals of interest from the selector block function; and

an output logic function coupled to the comparator logic function for controlling the internal signals on the ASIC.

14. The ASIC of claim 12 wherein the server utilizes the debug client to debug hardware within at least one of the plurality of logic functions.

15. The ASIC of claim 12 wherein the server utilizes the debug client to debug software within at least one of the plurality of logic functions.